

WHAT IS CLAIMED IS:

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1. A rotation control method for controlling rotation of a CAV system recording medium which has a plurality of zones divided in a radial direction thereof, comprising:

10 a detecting step which detects a state within a memory which temporarily stores write data to be written on the recording medium and/or read data read from the recording medium; and

15 a controlling step which switches and controls a rotational speed of the recording medium based on the state detected by the detecting step, depending on an area which is accessed of a plurality of areas of the recording medium dividing the recording medium in the radial direction thereof.

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2. The rotation control method as claimed
25 in claim 1, wherein said controlling step switches the rotational speed when a capacity of the memory occupied by the read data exceeds a first capacity during a read access, and switches the rotational speed when a vacant capacity of the memory exceeds a
30 second capacity during a write access.

35 3. The rotation control method as claimed in claim 1, wherein said controlling step switches the rotational speed by giving priority to an access

which uses a rotational speed in use.

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4. The rotation control method as claimed in claim 2, wherein said controlling step switches the rotational speed by giving priority to an access which uses a rotational speed in use.

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5. The rotation control method as claimed in claim 1, wherein said controlling step switches the rotational speed after a predetermined time elapses from a time when conditions for switching the rotational speed are satisfied.

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6. The rotation control method as claimed in claim 2, wherein said controlling step switches the rotational speed after a predetermined time elapses from a time when conditions for switching the rotational speed are satisfied.

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7. The rotation control method as claimed in claim 3, wherein said controlling step switches the rotational speed after a predetermined time elapses from a time when conditions for switching the rotational speed are satisfied.

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8. A storage apparatus for recording and/or reproducing information with respect to a CAV system recording medium which has a plurality of zones divided in a radial direction thereof,

5 characterized by:

a memory which temporarily stores write data to be written on the recording medium and/or read data read from the recording medium;

10 a detector which detects a state within the memory; and

a controller which switches and controls a rotational speed of the recording medium based on the state detected by the detector, depending on an area which is accessed of a plurality of areas of
15 the recording medium dividing the recording medium in the radial direction thereof.

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9. The storage apparatus as claimed in claim 8, wherein said controller switches the rotational speed when a capacity of the memory occupied by the read data exceeds a first capacity
25 during a read access, and switches the rotational speed when a vacant capacity of the memory exceeds a second capacity during a write access.

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10. The storage apparatus as claimed in claim 8, wherein said controller switches the rotational speed by giving priority to an access
35 which uses a rotational speed in use.

11. The storage apparatus as claimed in claim 9, wherein said controller switches the rotational speed by giving priority to an access which uses a rotational speed in use.

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12. The storage apparatus as claimed in claim 8, wherein said controller switches the rotational speed after a predetermined time elapses from a time when conditions for switching the rotational speed are satisfied.

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13. The storage apparatus as claimed in claim 9, wherein said controller switches the rotational speed after a predetermined time elapses from a time when conditions for switching the rotational speed are satisfied.

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14. The storage apparatus as claimed in claim 10, wherein said controller switches the rotational speed after a predetermined time elapses from a time when conditions for switching the rotational speed are satisfied.

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15. The storage apparatus as claimed in claim 8, wherein:

the storage apparatus has a normal mode in which the recording medium is rotated at a first rotational speed, and a high-speed mode in which the recording medium is rotated at one or a plurality of
5 second rotational speeds higher than the first rotational speed when making access to an area of the recording medium located on an inner peripheral side of an arbitrary area on the recording medium; and

10 said controller switches the rotational speed between the first rotational speed and the one or plurality of second rotational speeds.

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16. A storage apparatus for recording and/or reproducing information with respect to a CAV system recording medium which has a plurality of
20 zones divided in a radial direction thereof, characterized by:

memory means for temporarily storing write data to be written on the recording medium and/or read data read from the recording medium;

25 detecting means for detecting a state within the memory means; and

control means for switching and controlling a rotational speed of the recording medium based on the state detected by the detecting means, depending
30 on an area which is accessed of a plurality of areas of the recording medium dividing the recording medium in the radial direction thereof.

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